

# OPTICAL RECORDING AND REPRODUCING DEVICE, AND METHOD THEREOF

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## Abstract of JP11339305

**PROBLEM TO BE SOLVED:** To provide a device in which a reproducing signal strength is not reduced even with a large numerical aperture, by focusing a luminous flux emitted from a light source on a recording surface through an objective lens, and specifying a numerical aperture of the objective lens, and making an electric field vector of the incident light onto the recording surface perpendicular to the scanning direction on the recording surface. **SOLUTION:** An emitted luminous flux of a semiconductor laser 1 is converted into a parallel luminous flux through a collimator lens 2 and reaches a galvano-mirror 4 after transmitted through a polarizing beam splitter 3. The parallel luminous flux is changed in its emitting angle by the galvano-mirror 4 and focused on an optical disk surface 6 through an objective lens 5. The light beam reflected by the optical disk surface 6 is reflected by the galvano-mirror 4, and separated by the polarizing beam splitter 3 and guided to a light receiving part 7. In such a constitution, an electric field vector is applied in parallel with pit edge on the optical disk surface. The electric field is vibrating in the direction into the paper. This method is also effective to pre-pit of a rewritable disk, and does not reduce a reproduced signal intensity even with a numerical aperture of 0.75 or larger.

